ABSTRACT OF THE INVENTION

A baseband controller includes a micro-sequencer that is formed to include special hardware resources and a configuration that facilitates using the micro-sequencer as a

5   real-time baseband controller. The inventive micro-sequencer includes a 72-bit correlator that may also be used as an accumulator, wherein the topology includes the correlator being able to communicate with a 72-bit arithmetic logic unit which, therefore, enables the correlator to act as an

10 accumulator, as well as a plurality of clocks and timers that facilitate the timing functionality that is required to satisfy Bluetooth specifications. More specifically, the micro-sequencer includes at least four clocks and eight timers in one embodiment of the present invention. The four clocks

15 include an externally driven Bluetooth clock, an externally driven real-time clock, a native Bluetooth clock and a native real-time clock. The micro-sequencer of the described embodiment further includes at least four registers for temporarily storing computational data. The storage registers

20 are made to have different sizes for storing different sized packets of computational data.